



# Portable and In-Ground Spas Operating Manual

*'The Best Built Spas in the World'<sup>TM</sup>*

# Congratulations...

Congratulations...on becoming the owner of a SCS Industries Spa. You'll find the control systems in our Spas have been designed for simplicity and can be programmed to suit your individual preferences.

With the proper care and service of your new Spa, and the correct chemical maintenance of the water, your Spa will provide years of enjoyment.

Please take time to read this manual carefully before operating your Spa.

## Important.....

Do not power up your Spa until you have read this entire Operating Manual. Improper installation may result in equipment damage and void the Industries Water Tight Warranty.

# Contents

|                                                                                                                        | <b>page</b> |
|------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>General Information</b>                                                                                             |             |
| Spa Hardware Orientation                                                                                               | 4 - 6       |
| Warranty                                                                                                               | 7           |
| Serial Number                                                                                                          | 8           |
| Important Safety Instructions                                                                                          | 9           |
| <b>Installation</b>                                                                                                    |             |
| Preparing a foundation for Your Spa<br>- Indoor/Outdoor Portables                                                      | 10          |
| Installing Plumbed Shells                                                                                              | 11 - 13     |
| Plumbing of In-Ground Spas                                                                                             | 14          |
| Electrical Connections<br>- Requirements<br>- Note To Electrician<br>- Electrical Terminations                         | 15 - 16     |
| Touchpad Control Centre                                                                                                | 16          |
| Checklist Prior To Filling Your Spa                                                                                    | 17 - 18     |
| Start-Up                                                                                                               | 19          |
| <b>Maintenance</b>                                                                                                     |             |
| Spa Maintenance<br>- Hygiene<br>- Cleanliness                                                                          | 19 - 20     |
| Spa Filters<br>- Cleaning Your Spa Filters<br>- To Remove Cartridge Filter Elements<br>- Replacing / Inserting Filters | 21 - 22     |
| Draining The Spa                                                                                                       | 23          |

# Contents

|                                      | page    |
|--------------------------------------|---------|
| <b>Maintenance (continued)</b>       |         |
| Acrylic Shell                        |         |
| Maintaining Your Spa's Acrylic Shell | 24      |
| Spa Hardcover                        |         |
| - Maintaining Your Spa Cover         | 24      |
| Timber Cabinet                       |         |
| - Maintaining Your Timber Cabinet    | 25      |
| Headrests                            |         |
| - Removing Your Headrests            | 25      |
| Lights                               |         |
| - Underwater Light                   | 26 - 27 |
| - Changing The Coloured Lens         |         |
| - Replacing The Light Globe          |         |
| - Inside (Deluxe Models Only)        |         |
| - Outside (Standard Models Only)     |         |
| <br><b>Jet Information</b>           |         |
| Ozonator                             | 28      |
| Air Control                          | 29      |
| Aromatherapy Dispenser               | 29      |
| Air Injectors                        | 29      |
| Jets                                 |         |
| - Hurricane Jets                     | 30 - 31 |
| - Hurricane Swirl & Twin Spin        |         |
| - Monster Jet                        |         |
| - Cluster Jet                        |         |
| Swirl & Twin Spin Jet Maintenance    | 32      |
| - Massage Selector / Diverter Valve  |         |
| Blower & Pumps                       | 33      |
| Air Locks LF or DRY Messages         | 33      |
| Trouble Shooting                     | 34      |

# Spa Hardware

## Orientation

**Touchpad Control Centre** – located on the topside of your Spa. This touchpad operates pump/s, blower, temperature adjustment and other ancillary functions that you may have, such as filter cycles, lights and diagnostic codes.



**Control Box** – where power supply, blower, ozone (if used) and circulation pump are connected. Located in the engine bay of your spa.



**Main and Boost Pump** – (if applicable). Located in the engine bay of your Spa, this is the largest of the pumps in size and power. Used for creating water pressure through jets. Also used for filtration in the case of a 2-speed pumps option (refer to Controller Instructions).



# Spa Hardware

**Circulation Pump** (if fitted) – located in the engine bay of your Spa. This highly efficient, small power usage pump is used in the filtration and circulation of water through the heater.



**Ozone** (if fitted) –used for water purification. For additional chemical requirements when using ozone, contact your Dealer. There are two types of ozone units used in SCS spas. For further details see the Ozonator section on page 28 of this manual.

## Type 1

Balboa UV unit, which operates during filter cycles

## Type 2

24 hr UV model, located in the engine bay of the Swim Spa. Depending on the installer, in inground spas general it is located adjacent to boost pumps.



**Heater** – Housed with the control box.



# Spa Hardware

**Blower** – (if fitted) is located in the engine bay of the Spa. Its purpose is to blow air through the air injector to create bubbles (refer to Air Injector section on Page 29 in this Manual)



is

**Aromatherapy Canister** – (if fitted) is located on the topside of the Spa. This canister holds the Aroma Beads. To access the canister, unscrew the cap in an anti-clockwise direction. Ensure blower is not operational when removing cap.



**JetPak™** - (if fitted) the ultimate component. Interchangeable seats offering different combinations of jetting that can be adapted to individual needs and upgraded if required. Ask your Dealer for a brochure on the available options.

When changing JetPaks ensure power to Spa is turned off.



# General Information

## Warranty

SCS Industries Water Tight Warranty covers the Spa and associated equipment you have purchased. Please ensure you read and understand the Warranty and complete and forward any Warranty information to SCS Industries. Return of this information is critical in activating your Warranty.

Having your spa serviced at the recommended intervals, as detailed in the Spa's manual or Warranty, will ensure your Warranty remains valid.



## Access

**IMPORTANT NOTE:** As stated in the Pre-Delivery Manual, when installing the Spa ensure there is 500mm unobstructed clearance around the entire perimeter of the Spa. Ensure service access panels can be removed without obstruction. Failure to allow sufficient clearance may result in additional charges when servicing, general repairs or the need for warranty occurs.

# General Information

## Spa Serial Number

Your Spa has its own serial number. This number will need to be quoted if Warranty service should be required. This number can be found in one of two places. It could be handy to write the serial number on this manual for future reference.

### 1. Front Loading Skimmer Box

The serial number can be found on the opposite side of the pool to the digital touch panel. It is embossed into the outer acrylic edge of the pool.

### 2. Top Loading Skimmer Box

By simply removing the skimmer lid and exposing the filter cartridges, the serial number can be seen. It is embedded in the acrylic on the base of the Skimmer box where the filters fit into the plumbing .

## Identification / Compliance Label (Portable Spas)

SCS Industries Portable Spas come complete with their own Identification / Compliance Label which can be found in the engine bay area of the Spa. It is an aluminium label containing a host of information (pictured below).

Information will need to be given to the Dealer when purchasing consumables (eg filters or chemicals) or in the event of organising routine servicing of the Spa Pool or warranty requirements.

Inground model Spas are engraved with a serial number located on the opposite side of the Spa to the pump controls, embedded in the outer acrylic surface of the Spa (similar to that mentioned above for Front Loading Skimmer Box).



# General Information

## Important Safety Instructions

*Do not power up your Spa until you have read this entire Operating Manual.*

*Improper installation may result in equipment damage and void the SCS Industries Water Tight Warranty.*

### **Please take note:**

- *You must contact local Authorities in relation to pool fencing and other mandatory regulations that MUST be adhered to when installing a pool or spa. Australia and New Zealand pools must comply with AS1926*
- *Permit to fill your Spa may be required from your local government department.*

1. Do not use the Spa while under the influence of drugs or alcohol, as they cause drowsiness and can result in drowning.
2. Before entering the Spa, the user should check the water temperature with an accurate thermometer. A temperature of 38°C is considered safe for a healthy adult. Special caution is suggested for young children.
3. It is recommended that you use the Spa for no longer than 15-20 minutes at a time.
4. Do not put your head below water level.
5. Consult a doctor before using the Spa if taking any medication. Pregnant women should seek medical advice before entering a Spa.
6. Always disconnect Spa from power supply before servicing your Spa.
7. Always supervise children using the Spa.
8. Do not use a Spa that is not properly maintained and chemical balanced.
9. Ensure all electrical connections meet the appropriate codes and standards.

**Note:** *All Spas must be connected to a dedicated circuit protected by a safety switch and circuit breaker, and must comply with AS/NZ 3000.*

# Installation

## Preparing A Foundation For Your Spa

### Indoor / Outdoor

Your Spa needs a good solid foundation. The area that your Spa sits on must be able to support the weight of 500kg/m<sup>2</sup> (1000kg/m<sup>2</sup> for Swim Spas). If the foundation is inadequate, it may shift or settle after the Spa is in place, causing stress to the shell.

**Note:** Damage caused by inadequate or improper foundation support is not covered by the SCS Industries Water Tight Warranty. It is the responsibility of the Spa owner to provide a proper foundation for the Spa. (please refer to paragraph below)

Place the Spa on an elevated foundation so that water drains away from it. Proper drainage will keep components dry and protect them from continual damp conditions, and will also aid you when draining the Spa for maintenance.

If you are installing your Spa indoors, pay close attention to the flooring beneath it.

Always remember that the Spa is filled with water. Choose flooring that will not be spoiled or ruined from water damage. SCS Industries will not accept responsibility for water damage caused through Spa being placed in unacceptable surroundings.

If the Spa is to be located on decking ensure the deck is capable of withstanding the combined weight mentioned above. It is recommended that a qualified contractor prepare the foundation for your Spa. A base of 100mm (4inch) minimum concrete pad or equivalent is required to place your Spa. If mounting on a deck centre supports must be installed to support the centre of the Spa.

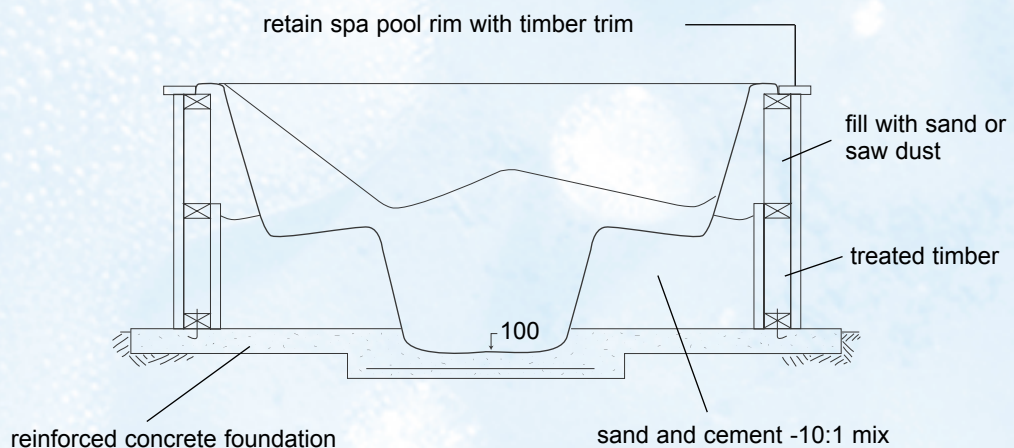
# Installation

## Installing Plumbed Shells:

### Above Ground Installation

(Timber Surround)

**Diagram A**



Prepare the foundation by excavating to the size required. Either lay the base first and let it cure, or sit the Spa pool into the wet foundation. The Spa pool must be levelled before the concrete sets. If you choose to have the base cure first, the Spa pool will have to be set into a weak sand and cement mix for leveling purposes (as shown in Diagram B).

After the Spa pool has been levelled and the base has set, the surround structure can proceed. The Spa pool return rim should be clear of the pool surround; no weight is to be taken by the rim. **Fill the bottom of the Spa pool with water to cover all plumbing outlets and check for water leaks;** rectify if necessary. Empty water after check is made.

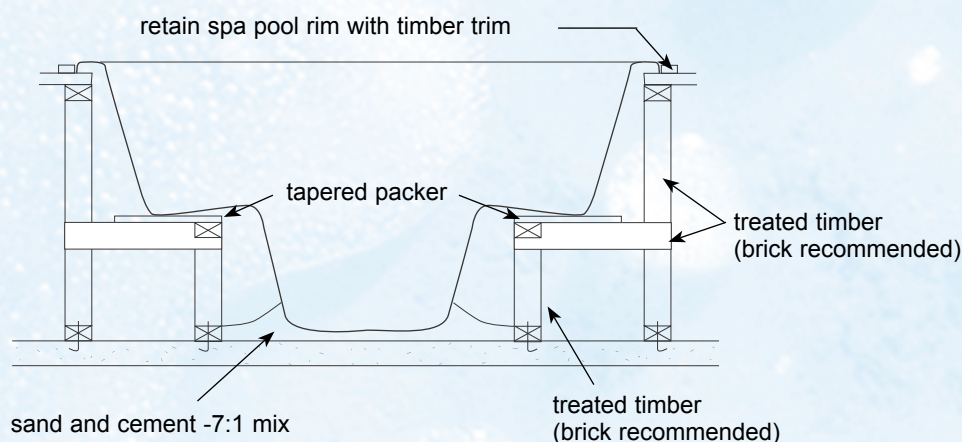
The seat and reclining area must be supported by a 10:1 sand and cement mix, constantly check the Spa pool for level when backfilling and check the sand mixture is packed firmly under both areas. The Spa pool can be further insulated by applying thermal insulating material between the Spa pool wall, and the surround structure where practicable.

# Installing Plumbed Shells

## Above Ground Installation

(Timber Support)

**Diagram B**



The above ground installation on an existing concrete slab can be performed by either using a combination of the arrangement in Diagram A or using a timber support structure in lieu of the sand/cement fill as shown in Diagram B. Build a support timber structure using heights for the seat and reclining area taken from the Spa pool. Allow 50mm under the base for the cement support.

Carefully reconstruct the seat area, because the seat area plus the base will be taking the major share of the weight. The reclining area will be supported where it touches the horizontal support structure. When you are satisfied the Spa pool will sit level and be firmly supported, remove the Spa pool from the frame and mix the cement for the base. Heap the wet cement mixture in place and position the Spa pool in the support structure. Move the Spa pool about until it is evenly supported and level.

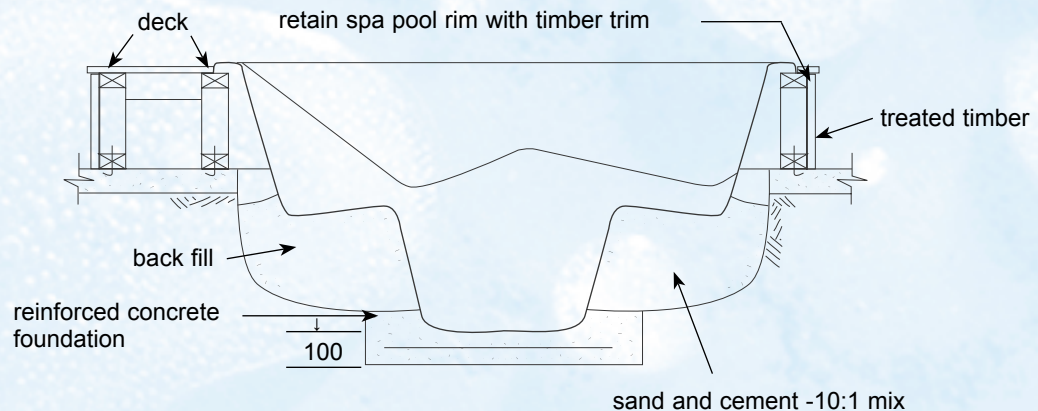
Complete the plumbing and structural surround after the base has set. Insulate around the Spa pool shell where practicable.

# Installing Plumbed Shells

## In-Ground Installation

(Timber or brick surround)

**Diagram C**



When installing your Spa pool partially in the ground, dig the hole to the required shape and depth allowing for the associated plumbing to the filter and pump. Pour the concrete and lower the Spa pool into the mixture, level and let cure. Complete all necessary pipe work below ground level.

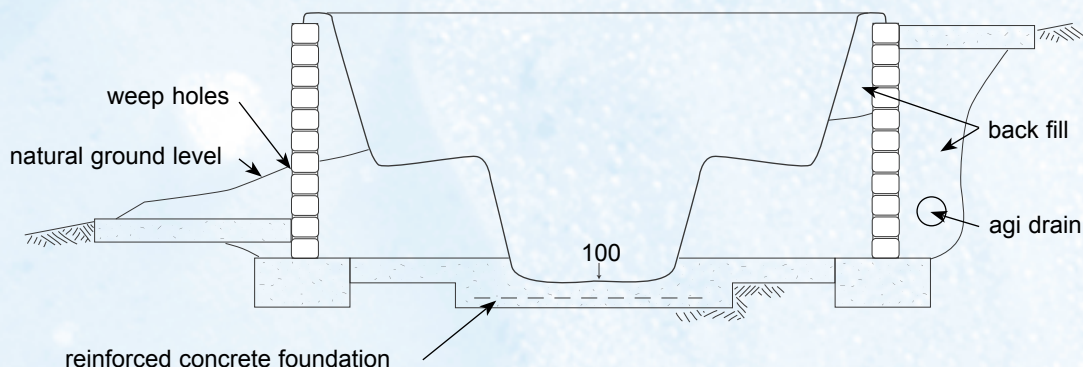
Fill the Spa pool with water up to the level of pipe work covered by the back fill and check for water leaks; rectify if necessary before proceeding. Empty water after check is made. Install the backfill of 10:1 sand and cement, taking care to pack firmly under the seat and reclining areas. Constantly check the Spa pool for level when back filling. Complete the Spa pool surround and plumbing.

## Sloping Site Installation

(Brick Surround)

When installing your Spa pool on a sloping site, the same procedure applies as above except that the brick wall would require building up (to the level of the sand and cement back fill) before back filling could be done.

Drain behind the brick wall if the site is exceptionally wet and provide weep holes in the front wall. Timber could be substituted for the brickwork.



# Plumbing of In-Ground Spas

Pumps, Heaters, Blowers etc. with In-Ground Spas can be plumbed in a number of configurations:  
(SCS Industries recommends)

**Figure 1.** Single pump option

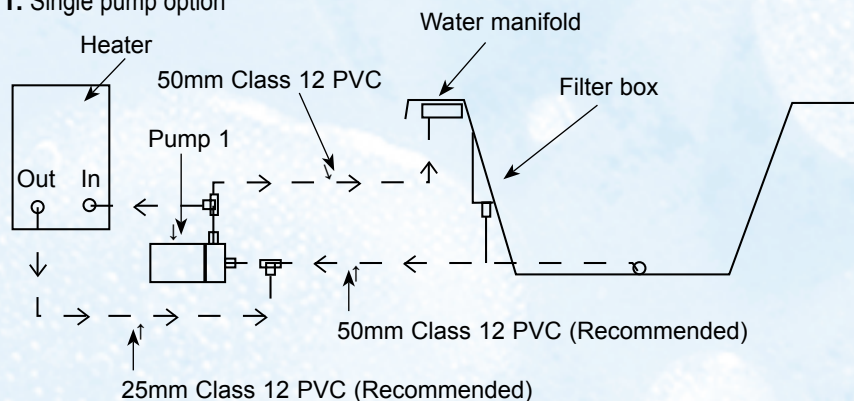
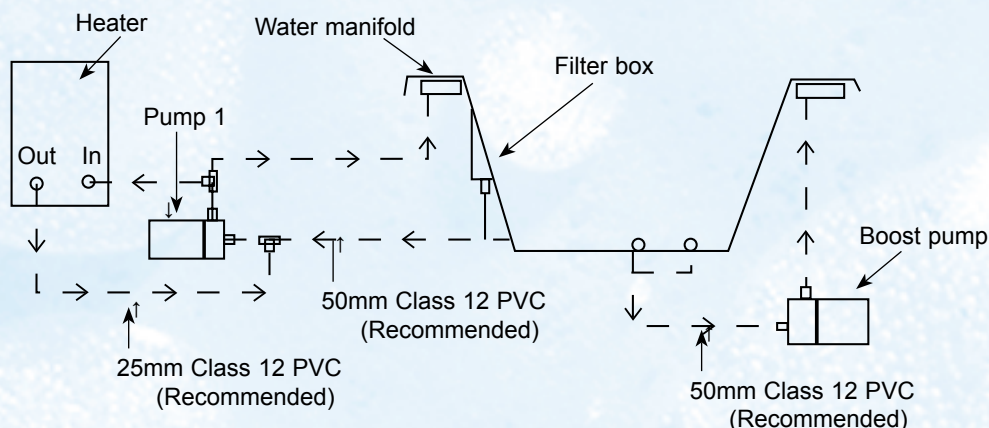


**Diagram D**

Note: Waterflow as per arrows.

**Figure 2.** Two Pump option



Note: Time Clock supplied is to operate PUMP 1 and a Light or Blower, but can not run two pumps. (Check specification of switch)

Our In-ground Spas are controlled via air switches (buttons) not by the electronic method mentioned in this manual for Portable Spas.

**Blower installation:** The blower needs to be mounted a minimum of 450mm above the water level of the Spa. This is to alleviate water entering the blower.

**Installation of pumps:** It is recommended that a one-way valve be placed in the suction line to the pump/pumps this is to allow the pump/pumps to hold their prime. Usually a pump will only lose its prime if it is mounted to high.

**A Tip:** When installing an in-ground Spa it is best to keep the number of bends and elbows used in the pipework to a minimum. Bends and elbows reduce water pressure to your jets. SCS Industries recommends using long sweeping bends, where a change in piping direction is required.

# Electrical Connections

As stated in the SCS Pre-Delivery Manual, supplied by your Dealer prior to your Spa's arrival, a qualified Registered Electrical Contractor must undertake all electrical connections. You must also have a Certificate of Electrical Safety issued by the Electrical Contractor at completion of the installation. This certificate may need to be presented to your Dealer or SCS Industries in the event of a warranty claim.

## Requirements:

1. **Extension cords are not to be used under any circumstances.**
2. **Ensure the power supply is correctly rated.**
3. **Ensure all electrical connections meet the appropriate codes and standards.**
4. **Keep electrical connections dry at all times.**
5. **A licensed electrician ONLY, must connect the power.**
6. **Ensure Spa is connected on a dedicated circuit protected by a safety switch.**

## Note to the Electrician:

*Drill appropriate size hole through base for cable and conduit entry. Ensure cables are fitted through base prior to filling with water.*

**Never rest Spa on power cords.**

# Power Consumption

The power consumption of your Spa pool can be found on the Identification / Compliance Label of your Spa (read about in 'Identification / Compliance Label section of this manual.

Power consumption is expressed in 'Full Load' and also 'Load Shed'

**Full Load** - is the maximum full load current draw of the Spa.

**Load Shed** - is a feature of the Balboa Control System which by a minor setting change will cause the heater to shut down when the boost pump or blower is actuated. Hence the lower power consumption valve.

Directions on ascertaining this setting can be found on the back of the Control Box lid.

# Power Consumption

## Electrical Terminations

With all SCS Industries Spas, you will usually find the Control Box at the same end of the Spa as the controller Touchpad Control Centre.

There are a number of electric controllers that you may find on your SCS Industries Spa. The **Balboa** system is the unit most widely used by SCS Industries. If it requires direct wiring the terminal connection can be found inside the Control Box.

The Balboa system has a Terminal Block in the control box similar to that in adjacent photo.

To gain entry to the Engine Bay, remove service access doors with Allenkey (supplied). The Engine Bay can be found below the Digital Touchpad Control Centre.

Be sure to take extreme care when connecting power cables to the unit, as incorrect connection can cause damage to the Control System.

Power supply to the Spa needs to be on a dedicated circuit and be protected by a Residual Current Device (Safety Switch), as well as the correct size cable and circuit breaker protection.



*Terminal Block*

In-ground Spas are controlled from air buttons located on the topside of the Spa. All electrical equipment must be located away from the Spa itself. (The distance may vary, depending on the state and country codes and standards). Please read instructions supplied with the air switches in relation to mounting distance from the air buttons installed in the Spa shell.

## Touchpad Control Centre (Portable Spas)

The Spa is fitted with a Balboa Touchpad Control Centre. The instruction sheet for your Spa Control Centre will be supplied with your Spa. The instruction sheet shows step by step operation procedures to operate pumps, blower, light (if applicable), ozone (if applicable) also for the control and setting of filter times and filter durations.

# Checklist

## Checklist Prior To Filling Your Spa

Never operate equipment without correct water in your Spa. Serious damage to the pump and/or heater may occur. Damage caused to the pumps or heater through poor water chemistry will not be covered by the SCS Industries Water Tight Warranty.



- ☐ Remove all access service panels around the exterior of the Spa, inspect for any item that may have come adrift or loosened during transport. Leave doors off until Spa is filled with water and a check for leaks has been undertaken.



Barrel Unions

- ☐ Check barrel unions on all pumps and heaters to ensure they are tight; as they may loosen during transport.

They are not a Warranty item, and must be tightened prior to Start Up.



- ☐ Check external drain/fill valve (if installed) is closed and drain cap tight.